

What is claimed is:

1. In a virtual local area network(VLAN) data switching system handling data traffic between source and destination hosts existing in different VLANs, a VLAN data switching method using an address resolution protocol(ARP) packet, characterized in that a unicast packet is transmitted directly between the source and destination hosts using a virtual ARP request packet.

2. The method of claim 1, wherein the virtual ARP request packet is transmitted with an internet protocol(IP) and a media access control(MAC) address of the source host included therein.

3. A virtual local area network(VLAN) data switching method using an address resolution protocol(ARP) packet, comprising the steps of:

making a source host broadcast an ARP request packet;

making a Proxy ARP server prepare to transmit a virtual ARP request packet in accordance with the ARP request packet received from the source host; and

making a destination host transmit an ARP response packet directly to the source host through a switching unit

upon the destination host receiving the virtual ARP request packet from the proxy ARP server.

4. The method of claim 3, wherein the virtual ARP request packet is transmitted with an internet protocol(IP) address and media access control(MAC) address of the source host included therein.

5. The method of claim 3, wherein a port moving sensor function of the switching unit is disabled so that the source host is not misinterpreted as being connected to a port to which the Proxy ARP server belongs.

6. The method of claim 3, wherein the ARP response packet is transmitted directly to the destination host so that the destination host includes its own internet protocol(IP) address and its own media access control(MAC) address in response to the virtual ARP request packet.

7. The method of claim 3, wherein the step of making a source host broadcast an ARP request packet further comprising a step of storing a media access control(MAC)

address of the source host in a media access control(MAC) table.

5 8. The method of claim 3, wherein the step of making a destination host transmit an ARP response packet further comprising the steps of:

making the source host transmit the ARP response packet;

10 storing a media access control(MAC) address of the destination host in a media access control(MAC) table; and

transmitting the ARP response packet to the destination host in direct through the switching unit.

15 9. The method of claim 3, wherein the method further comprises a step of the source and destination hosts directly exchanging data packets using a MAC address stored in a MAC table.

20 10. A virtual local area network(VLAN) data switching method using an address resolution protocol(ARP) packet, comprising the steps of:

making a source host broadcast an ARP request packet;

storing a MAC address of the source host in a MAC table;

making a Proxy ARP server prepare to transmit a virtual ARP request packet in accordance with the ARP request packet received from the source host;

making a destination host transmit an ARP response packet directly to the source host upon the destination host receiving the virtual ARP request packet from the proxy ARP server;

storing a MAC address of the destination host in the MAC table; and

making the source host transmit data directly to the destination host using the MAC address of the destination host.

11. The method of claim 10, wherein the virtual ARP request packet is transmitted with an internet protocol(IP) address and a media access control(MAC) address of the source host included therein.

12. The method of claim 10, wherein a port moving sensor function of a switch is disabled so that the source host is not misinterpreted as being connected to a port to which the Proxy ARP server belongs.

13. The method of claim 3, wherein the ARP response packet is transmitted directly to the destination host so that the destination host includes its own internet protocol(IP) address and its own media access control(MAC) address in response to the virtual ARP request packet.